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REMARKS

Claims 1 - 35 and 47 - 52 remain pending in the present application. No new matter has been added. In view of the following remarks, it is respectfully submitted that all of the presently pending claims are allowable.

Claims 1 - 4, 6, 9, 10, 12-18, 20, 21, 23, 24, 27, 28, 30 and 32 - 34 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,551,301 to Gijsbers et al. ("Gijsbers") in view of U.S. Patent Publication No. 2004/0116789 to Cancro et al. ("Cancro") in further view of U.S. Patent No. 6,575,928 to Saul et al. ("Saul").

Claim 1 recites a method of treating a central nervous system (CNS) disorder, comprising the steps of "inserting into a patient's body first and second conduits so that distal ends of the first and second conduits open to a portion of the patient's CNS with direct access to cerebrospinal fluid (CSF) and so that *a proximal end of the first conduit opens into a first reservoir of material to be introduced into the CSF and a proximal end of the second conduit opens to drain CSF withdrawn from the CNS and permanently prevent the withdrawn CSF from reentering the CNS*" and "determining a chemical imbalance present in the CSF by one of a microassay of a sample of CSF and the detected and analyzed brain activity" in combination with "treating the patient based on the determined chemical imbalance by one of supplying an agent to the CSF via the first conduit and withdrawing a quantity of CSF via the second conduit."

Gijsbers, on the other hand, purports to disclose a device recirculating previously withdrawn CSF to the patient. As shown in Figure 1, CSF is withdrawn via conduit 12, treated in ion concentration adjustment mechanism 16, and then reintroduced to the patient via conduit 18. Thus, Gijsbers does not teach a method of "inserting into a patient's body first and second conduits so that distal ends of the first and second conduits open to a portion of the patient's CNS with direct access to cerebrospinal fluid (CSF) and so that *a proximal end of the first conduit opens into a first reservoir of material to be introduced into the CSF and a proximal end of the second conduit opens to drain CSF withdrawn from the CNS and permanently prevent the withdrawn CSF from reentering the CNS,*" as recited in claim 1.

The Examiner seeks to cure this deficiency in the Gijsbers device by referencing Saul, noting that "Saul teaches a device for removing CSF from the CNS and draining the fluid into

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either a site within the patient's body, or outside the patient's body to prevent absorption or recirculation of toxic material (Col. 6, lines 48-63)." (See 11/16/2007 Office Action, p. 3). However, it is noted that the aforementioned modification to the Gijsbers device would be detrimental to the functioning thereof. Specifically, Gijsbers is directed solely to a device which corrects an ion concentration in the CSF by withdrawing a quantity of CSF, changing the ion balance of this quantity and reintroducing it to the nervous system. The conduits 12 and 18 are connected to one another via a pump 14 and to an ion concentration adjustment mechanism 16. Altering the Gijsbers device to "*permanently prevent the withdrawn CSF from reentering the CNS*", as recited in claim 1, would completely frustrate the purpose of the Gijsbers device, as recirculation of the CSF is vital to the adjustment of the CSF ion concentration. The key feature of the Gijsbers device is to "change[] the ion concentration in brain fluid" by removing the fluid from the body, adjusting the ion concentration and re-injecting it into the brain. (*Gijsbers*, col. 2, ll. 53-56). It is respectfully submitted that the change proposed by the Examiner fundamentally alters the Gijsbers device by preventing this re-injection of treated CSF, defeating the adjustment of the ion balance which is critical to the epilepsy-treatment to which the device is directed. It is noted that if a proposed modification renders a prior art invention unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification. (See *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984)). It is therefore respectfully submitted that those skilled in the art would not be motivated to eliminate this recirculation of the CSF and that such a modification is, in fact, taught away from by Gijsbers. Thus the modification of Gijsbers proposed by the Examiner is an impermissible hindsight reconstruction of the invention and should be withdrawn.

Furthermore, Cancro relates to a method of 3-D brain source localization that does not involve any withdrawal of CSF and does not overcome the above-noted deficiency in Gijsbers. Saul which is directed to a device and method for controlling a flow of CSF draining from the body also fails to overcome this deficiency as there would be no benefit to the proposed combination and the purpose of the Gijsbers device would be frustrated. Specifically, Saul discloses a method by which a flow detection component 80 and flow control component 60 are attached to an access component 50 to remove CSF from the body and has no bearing on the adjustment of the ion concentration to which Gijsbers is directed. (See *Saul*, col. 7, ll. 23-32).

It is therefore respectfully submitted that Gijsbers, Cancro and Saul, taken either alone or

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in combination, do not show or suggest a device with *first and second conduits* having distal ends "open to a portion of the patient's CNS with direct access to cerebrospinal fluid (CSF)" wherein "a proximal end of the first conduit opens into a first reservoir of material to be introduced into the CSF and *a proximal end of the second conduit opens to drain CSF withdrawn from the CNS and permanently prevent the withdrawn CSF from reentering the CNS*", as recited in claim 1.

For these reasons it is submitted that claim 1 is allowable. Because claims 2 - 4, 6, 9, 10 and 12 - 18 depend from and therefore include all the limitations of claim 1, it is respectfully submitted that these claims are also allowable.

Similarly to claim 1, claim 20 recites a system for treating disorders of the central nervous system (CNS), comprising "first and second conduits, wherein, when in an operative position, distal ends of the first and second conduits open into a portion of a patient's CNS with direct access to cerebrospinal fluid (CSF) and wherein, when in the operative position, a proximal end of the second conduit opens to drain CSF from the CNS and *permanently prevent the drained CSF from reentering the CNS*" and "a first pump coupled to the reservoir and the first conduit for introducing the first material to the CNS via the first conduit."

Thus, it is respectfully submitted that claim 20 and the claims 21, 23, 24, 27, 28, 30 and 32 - 34 dependent therefrom are allowable for the same reasons stated above in regard to claim 1.

In addition, Applicant notes that neither Gijsbers nor Cancro nor Saul teaches "a first reservoir implantable within the patient's body..." for holding a material to be introduced into the CSF, as recited in claim 20. Cancro does not relate in any way to withdrawing CSF or treating it with therapeutic agents maintained in reservoirs and so shall not be discussed further. Saul does not address the matter of introducing agents into the CSF but rather, is directed solely to the drainage of CSF from the body. Although the ion concentration adjustment mechanism 16 in Gijsbers treats the ion concentration of withdrawn CSF via "chemical treatment" (column 2, line 52), the chemical used for this treatment is not kept in any reservoir that is implantable inside a body. Since the chemical used by the Gijsbers system to treat CSF is stored outside of the body, Gijsbers does not teach the "first reservoir" of claim 20. Nor is any such implantable reservoir suggested by Gijsbers.

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It is therefore submitted that claim 20 is allowable over Gijsbers in view of Cancro in further view of Saul for the additional reason noted above. Because claims 21, 23, 24, 27, 28, 30 and 32 - 34 depend from, and therefore include all the limitations of claim 20, it is respectfully submitted that these claims are also allowable.

Claims 5, 11, 22 and 29 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Gijsbers in view of Cancro in view of Saul and in further view of U.S. Patent No. 6,436,091 to Harper et al. ("Harper"). It is respectfully submitted that Harper does not cure the deficiencies noted above with respect to Gijsbers, Cancro and Saul and that claims 5, 11, 22 and 29 are therefore allowable for at least the reasons given above in support of the patentability of claims 1 and 20 from which these claims depend.

Claims 7, 8, 25 and 26 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Gijsbers in view of Cancro in view of Saul and in further view of U.S. Patent Publication No. 2003/0130645 to Brengle et al. ("Brengle"). It is respectfully submitted that Brengle does not cure the deficiencies noted above with respect to Gijsbers, Cancro and Saul. It is therefore respectfully submitted that claims 7, 8, 25 and 26 are allowable for at least the reasons given above in support of the patentability of claims 1 and 20.

Claims 19 and 35 stand rejected under 35 U.S.C. § 103(a) as obvious over Gijsbers in view of Cancro in further view of Saul. It is respectfully submitted that Saul, as applied to this rejection, also does not cure the deficiencies noted above with respect to Gijsbers, Cancro and Saul. It is therefore respectfully submitted that claims 19 and 35 are allowable for at least the reasons given above in support of the patentability of claims 1 and 20.

Claims 47, 48, 50 and 51 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Gijsbers in view of Cancro in view of Saul and in further view of U.S. Patent No. 5,617,873 to Yost et al. ("Yost"). It is respectfully submitted that Yost does not cure the deficiencies noted above with respect to Gijsbers, Cancro and Saul and Applicant respectfully submits that claims 47, 48, 50 and 51 are allowable for at least the reasons given above in support of the patentability of claims 1 and 20.

Claim 52 stands rejected under 35 U.S.C. § 103(a) as obvious over Gijsbers in view of

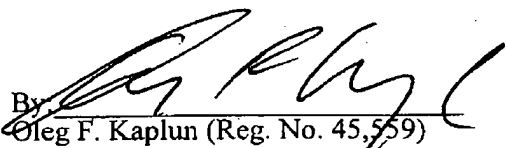
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Cancro in view of Saul and in further view of U.S. Patent Publication No. 2003/0171711 to Rohr et al. ("Rohr"). It is respectfully submitted that Rohr does not cure the deficiencies noted above with respect to Gijbsbers, Cancro and Saul and Applicant respectfully submits that claim 52 is allowable for at least the reasons given above in support of the patentability of claim 20.

In light of the foregoing, Applicant respectfully submits that all of the presently pending claims are in condition for allowance. All issues raised by the Examiner having been addressed, an early and favorable action on the merits is earnestly solicited.

Respectfully submitted,

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